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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/961,956	10/31/1997	JOSE SANCHO ROYO	B-3379-61628	8284

7590 11/19/2003  
LADAS & PARRY  
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SUITE 2100  
LOS ANGELES, CA 90036

EXAMINER
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PASTERCZYK, JAMES W

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 11/19/2003

37

Please find below and/or attached an Office communication concerning this application or proceeding.

CL037

~~CL037~~**Office Action Summary**

Application No.

08/961,956

Applicant(s)

ROYO ET AL.

Examiner

J. Pasterczyk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2003 and 11 April 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 56-96,98-107 and 111-123 is/are pending in the application.
- 4a) Of the above claim(s) 94-96 and 98-107 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 56-93 and 111-123 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 56-96,98-107 and 111-123 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 11 April 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>35</u> . | 6) <input type="checkbox"/> Other:  |

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1. This Office action is in response to the IDS filed 2/28/03 and the amendment filed 4/11/03 and refers to the Office action mailed 3/10/03. Certain items have been crossed off the IDS as duplicative of art already of record.

2. Claims 57, 65, 66, 75, 78, 79, 84, 87, 88, 67, 81, 90, 114, 115, and 117 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 57, only the limitation on R set forth in l. 1-9 further limits the claim; the rest from the semicolon in l. 9 onward is prolix. Likewise with claim 75

In claim 65, the matter from the formulae I and II to the "and" of the fourth line from the end is prolix and does not further limit the claim since it is contained in claim 56. Likewise with claim 66 up to the beginning of step (b).

In claim 78, the "wherein" clause of l. 4-5 does not further limit the claim and is prolix and thus should be cancelled. Likewise with claims 79 and 87.

In claim 84, the material after the "wherein" clause of l. 9 does not further limit the claim, is prolix and should be cancelled.

In claim 88, the "wherein" clause of l. 4-5 fails to further limit the claim, is prolix, and should be cancelled.

In claim 67, it is not clear if the cocatalyst recited in l. 2 is that of claim 65 from which this directly depends or of claim 56. Likewise with claim 68 with regard to claim 66 or 56.

In claim 81, it is not clear if the cocatalyst recited is of claim 56 or claim 67.

In claim 90, it is not clear if "the cocatalyst" refers to that of claim 56, 66 or 68.

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In claim 114, it is not clear if "the cocatalyst" refers to that of claim 65 or 56; it is suggested that the last line be amended to read "... said catalyst." Likewise with claim 115 regarding claims 66 and 56.

In claim 117, the "wherein" clause from l. 1-4 fails to further limit the claim, as does the "wherein" clause of l. 5-8; these clauses should be cancelled.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 56-93 and 111-123 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Vega, Gila I, Gila II, or Antberg in view of Huh, all as cited previously and for the reasons of record previously given, and in view of Blumel, J. Am. Chem. Soc., vol. 117, no. 7, pp. 2112-2113 (1995) (hereafter referred to as Blumel).

The disclosures of Vega, Gila I, Gila II, and Antberg have been discussed in previous Office actions. Each has metallocenes with side groups that may be siloxy groups.

None of these explicitly discloses that a siloxy group would react with a surface hydroxyl or oxy group on a silica support.

However, Huh teaches that such a siloxy group would react with surface hydroxyls of a support to form covalent bonds between the support and the metal-containing molecule (col. 3, l. 40 et seq.) Blumel likewise teaches the same thing in its reactions 1 and 3.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Huh and Blumel to the disclosures of any of Vega, Gila I, Gila II, or Antberg with a reasonable expectation of obtaining a highly-useful supported olefin polymerization catalyst with the expected benefit of the catalyst not bleeding off the support.

5. Applicant's arguments filed 4/11/03 have been fully considered but they are not persuasive.

Applicants' characterization of what is formed does not appear to be accurate. There does not appear to be the explicit, claimed necessity of any sort of "spacer" between the metallocene Cp groups and the support. Instead, that appears to be only inferred. What is more likely formed is a species of the sort described by Blumel, in which the siloxy group reacts with a surface hydroxyl or a bridging oxy group, leaving behind a surface bound siloxy and metallocene Cp ring. Regardless, the supported metallocenes of the primary references appear to read on those of the present claims. It is known conventionally in the art that Si-O bonds are quite strong; examples of compounds demonstrating such include silicones and silica, i.e. sand. Hence it would have been reasonable to expect that the siloxy group required on the metallocenes of the present invention and found in the prior art would have reacted with surface hydroxyls or oxy groups in the manner noted by Blumel.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 703-308-3497. The examiner can normally be reached on M-F from 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MARK BELL, can be reached on (703) 308-3823. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

JP

11/4/03

  
Mark L. Bell  
Supervisory Patent Examiner  
Technology Center 1700